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THE FUTURE USE OF LAND IN THE UNITED STATES.

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CONTENTS.

	Page.
Land as a natural resource	4
Agricultural land	6
Grazing land	7
Desert land	7
Forest land	8
Intermediate land	9

ILLUSTRATION.

	Page.
FIG. 1. Probable future land classification of North America	5

[Cir. 159]

THE FUTURE USE OF LAND IN THE UNITED STATES.

In the last analysis all material wealth, all the comforts and necessities of life, are the product of two elements—nature and labor. It may be truly said that nature, or the earth, is the mother and labor the father of all products necessary to sustain human life. The richness and prosperity of a country, therefore, depend on the presence of natural resources within its borders, such as water, minerals, forests, and cultivable soils on the one hand, and intelligent human energy on the other to shape them into the forms necessary for the needs of man. Of the two elements the natural resources are indispensable, for in a country like the Desert of Sahara all human effort would be of but little avail. The growth of a nation depends, therefore, upon the extent of the natural resources and upon the knowledge of how to use them with as little destruction as possible.

The resources of a country fall naturally into three groups—water, minerals, and land—which represent, respectively, resources which are inexhaustible, resources which are exhaustible and can not be renewed, and resources which are exhaustible but can be renewed.

It may be questioned, indeed, whether there is such a thing as an inexhaustible natural resource. Even water, through the denudation of the drainage basins, may become irregular in its flow, or through the careless disposal of refuse may become polluted so that it can not be used. Mines are illustrations of resources which are exhaustible and not renewable. Gas, oil, coal, and iron once gone are gone forever. Of all the natural resources the only one which contains within itself the possibility of infinite renewal is land. The nation should therefore be most vitally concerned with the conservation and improvement of this resource. Human control over such natural resources as minerals is limited. The only possible means of conservation is the avoidance of waste, but their ultimate exhaustion is unavoidable. With agricultural and forest land, however, it is otherwise. Land can not only be conserved, but constantly improved and its yield increased. While in England the iron ores and the coal are becoming constantly harder to get and their exhaustion is threatened, the agricultural land, after a thousand years of cultivation, is now more productive than ever. The wheat fields of England under intensive cultivation yield 30 bushels to the acre, while the virgin fields of America on an average yield less than 13.

If a farsighted national policy in the conservation of natural resources is to make provision for an ever-increasing population, then the greatest possibilities lie in the direction of developing the

land in all its forms—field, forest, and range—for, notwithstanding all possible economy in the use of the nonrenewable resources, they are bound to decrease as time goes on. Nor will they be able to give employment to the increasing population. Only in the development of the renewable resources lies an infinite field for the support and employment of a growing population.

LAND AS A NATURAL RESOURCE.

In a new country, with a wealth of land and a scanty population, the use to which the land is first put can not serve as an indication of its best ultimate use. Gradually, as the population increases and the knowledge of the properties of the different classes of land grows, there is a closer correspondence between the character of the land and the crops to which it is devoted. In such densely populated countries as Belgium and France practically every acre of land is put to its most appropriate use. Thus in France, for instance, 83 per cent of the poorer sandstone soils is forested, while of the fertile alluvial soils only 5 per cent is under forest. More than half (56 per cent) of the French forests are on nonagricultural, calcareous soils. But in this country there are still thousands of acres naturally adapted to agriculture which are now under forest growth, chiefly hardwoods; and there are many slopes cleared of timber and turned into pastures or fields which in a few years become washed out and had best be kept under forest cover.

How rapidly the relative areas of land devoted to the different purposes are changing may be seen from this. Hardly one hundred years ago the United States east of the Mississippi River was an almost unbroken forest, comprising something over 1,000,000 square miles, or about 700,000,000 acres. Now, after about a century of settlement, there are not more than 300,000 square miles of merchantable forest land in the eastern United States. About 330,000 square miles have been cleared for farm land. The remainder has been culled of its valuable timber and devastated by fire or else turned into useless brush land. With the growth of population and the greater demand for agricultural land the ratio between farm and forest land will change still further. The forests will be more and more crowded into the mountains and upon soils too thin or too poor for agricultural purposes. It may be safely assumed that in fifty or one hundred years the proportion of land devoted to the different purposes will change almost as much as it has during the past century. These changes will occur especially in the eastern part of the United States, because there the forest is not confined, as it is in the West, to high altitudes, where agriculture is generally impracticable. In the West the forests, with a few exceptions, as in the low country around Puget Sound, are in the high mountains, which rise in the midst of semiarid plains, and their original area of 150,000 square miles, half of which lies in the Sierra Nevadas and in the Cascades and half in the Rockies, has

changed but very little since settlement. In the West the increase of agricultural land must be secured chiefly through the irrigation of the semiarid land.

If we take a long look ahead into the future and try to picture to ourselves what will be the ultimate proportion of farm, forest, range, and desert in this country fifty years from now, in the light of the

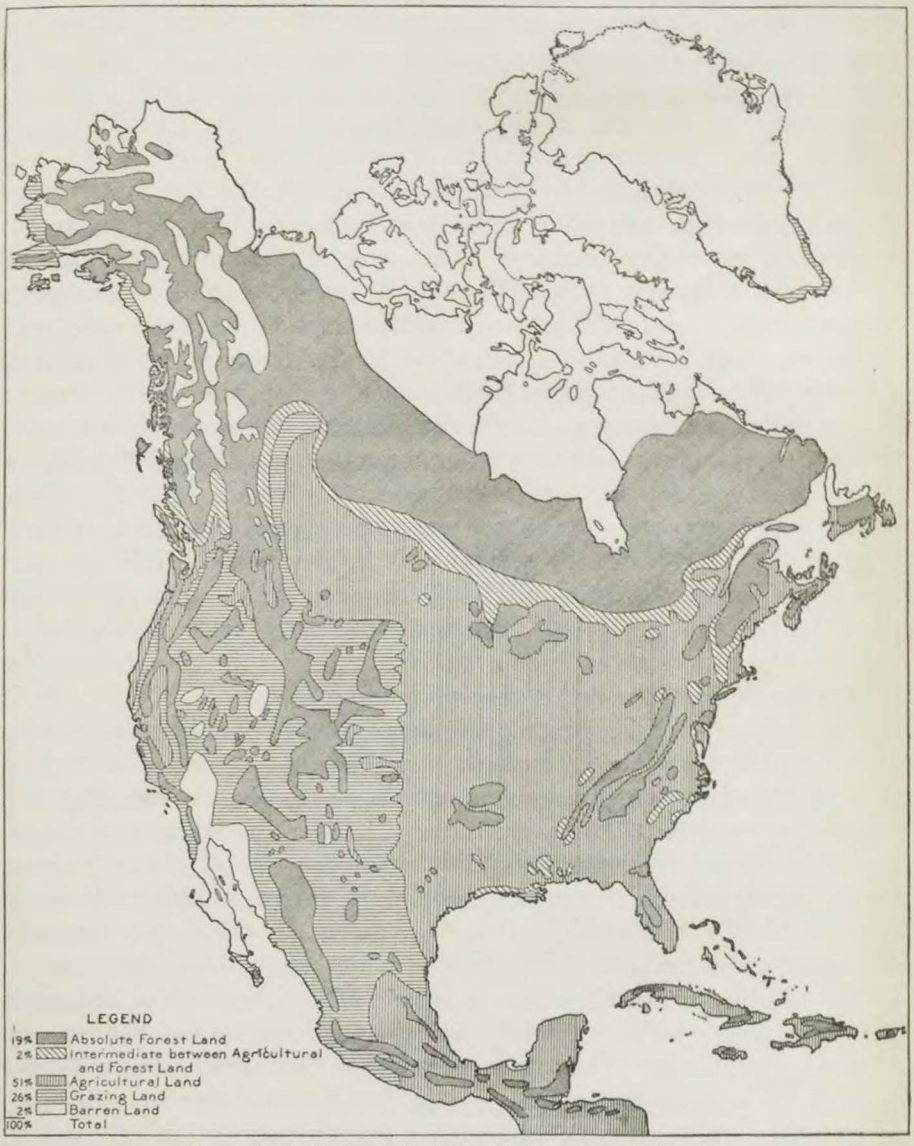

FIG. 1.—Probable future land classification of North America.

increasing demand for agricultural land and of an approximate knowledge of the climatic conditions and the physical properties of the different lands in this country, we shall get something like the condition shown in figure 1.

AGRICULTURAL LAND.

The area devoted to agriculture in a half century, instead of being 21 per cent of the total area, as it is now, will be nearer 50 per cent. That this is not an overestimate is indicated by the fact that during the last fifty years the improved farm land in this country has advanced in round figures from 113,000,000 acres to 415,000,000 acres, an increase of 302,000,000 acres, or nearly 370 per cent. At such a rate of increase, the agricultural area of this country in 1950 would require an additional area of over 1,000,000,000 acres and would include nearly 80 per cent of the total land area of the United States.

With more intensive methods of cultivation larger yields will undoubtedly be obtained from the same area, yet the area itself under agricultural crops will have to be increased, especially if we are to remain an exporting country. This is well shown in the case of some of the older countries. Thus in Belgium the arable land forms 63 per cent of the total land area, in Denmark 68, in France 48, and in Germany 47. Still, these countries are not exporters of cereals, although their methods of cultivation are highly developed. France is especially interesting as a criterion, because its methods are most intensive and it is the only country that is self-sustaining; it produces 98 per cent of all the cereals which it consumes. There is little doubt that our population in the next fifty years will reach at least 150,000,000, or about 50 persons per square mile. Whether the acreage of improved farm land will increase at a much faster rate than the population, as has been the case in the past, or whether it will grow at the same or even a slower rate than the population, the future alone can tell; but increase it must.

The Bureau of Statistics of the Department of Agriculture estimated in 1900 that upon the basis of our present actual consumption as a people, disregarding entirely our export trade, the country will require by the year 1931 the following additional acreage: For wheat, 13,500,000 acres; for corn, 66,000,000 acres; for oats, 23,700,000 acres; for the minor cereals, 10,000,000 acres; and for hay, 40,500,000 acres; a total of 153,700,000 acres, without providing for the proportionately increased consumption of vegetables, fruits, and other products.

The amount of farm land as compared with other classes of land is not determined, however, solely by economic conditions, but also by natural conditions. Thus in mountainous Switzerland only 17 per cent of the land is cultivated, and in Sweden and Norway, situated in an unfavorable climate and with a scanty population (29 and 18 persons per square mile, respectively), the proportion of arable land is 8.7 per cent and 1.3 per cent, respectively. In the eastern part of our own country, with less rugged topography than the West and more favorable climatic conditions, the extension of farm land will go on at the expense of the land now occupied by the forest, but

capable of producing crops, and the forest land proper will be confined to thin soil and the steep slopes of the mountains. In that part of the West which has a very rugged topography and very unfavorable climatic conditions additional farm land will be won chiefly from the semiarid lands and not from the forests, which have been relegated by nature itself to soils and situations unsuitable for agriculture. There is, of course, here and there in the Pacific coast mountains, and even in the Rocky Mountains, land which can be used for agricultural crops, but on the whole the western mountains will always remain chiefly a forest region and the relative area of forest land and farm land there will always be determined chiefly by nature.

GRAZING LAND.

Land chiefly valuable for grazing will form about one-fifth of the extent of the United States proper. This land originally lay west of the one hundredth meridian, in the plains and mountain valleys, but with the advance of dry farming its eastern boundary has been shifted farther west to about the one hundred and third meridian. This land receives but a scanty rainfall and can produce neither forest nor field crop, but supports a vegetation of hardy grasses. It was formerly the natural range of millions of buffalo and is now the grazing ground of herds of cattle and sheep. This land will remain largely a natural range, since the area which can be irrigated, and thus reclaimed for agricultural purposes, or which can even be used for dry farming, is comparatively small.

According to government estimates, the available water will be sufficient to irrigate 71,000,000 acres, or 1 acre in 7½ of the entire region. The Reclamation Service, however, does not expect to reclaim more than 5 per cent of all the arid land. This area, together with that used for dry farming, may hardly be sufficient even to counterbalance the reduction of the productive area in the United States through the growth of cities, the building of railroads, and the general development of commerce and nonagricultural industry. With the exception of this 5 per cent and whatever area can be brought under dry farming, the rest of the land will be forever devoted to grazing purposes. While only a small portion of this land can be brought under the plow, the possibilities for increasing its productiveness as a range—at least the 300,000,000 acres of public grazing land—are very great.

DESERT LAND.

About 2 per cent of the total land area will forever remain desert. There are but few areas within the United States which, either on account of the intense heat, very low temperatures, alkali, or lack of rainfall are unfit for the use of man and may be truly considered desert land. Such land is found in the Southwest about the Gulf of

California, in Nevada, in Utah, and in Oregon in the form of arid basins. Ice-bound deserts are found in Alaska and on the glacier-covered mountains. This land must, so long as the climatic conditions of the country continue as they are, remain unproductive.

FOREST LAND.

The land chiefly valuable for growing forests will shrink to about 360,000,000 acres, less than one-fifth of the extent of the United States proper. Together with the wood lots which will continue to form part of the farm land, the total forest area will amount to approximately 450,000,000 acres, or a fourth of the total land area.

This reduction in the extent of the forest land is an inevitable consequence of the economic development of this country. The land devoted to agricultural crops must increase with the increase in population. It is self-evident that with a population of probably not less than 150,000,000 people in 1950 the land necessary to supply the food for home consumption alone must be larger than at present, even with the improved methods of cultivation.

Where will this increase come from?

As we have seen, although some land can be won from the plains through reclamation and dry farming, this area will hardly be enough to offset the loss of productive land through the growth of cities, and will at best supply only a small part of the additional area needed for raising farm crops. In the West, except in a few places along the Pacific coast, the forest areas will not be reduced, for the simple reason that the land there is not suitable on the whole for agricultural purposes. If it were reduced, the result would be to reduce the farm land lying below, which is dependent upon irrigation. The additional agricultural land must come, therefore, chiefly from the East through improvement of the present unimproved farm land and swamp land and at the expense of the forest land proper.

The forest area will be confined more and more to land which is clearly unsuitable for agriculture and which can best be utilized in producing trees. This absolute forest land, as we may call it, will occupy, as far as one may judge, about 360,000,000 acres, or nearly one-fifth of the total land surface. Of this about 63 per cent, or 12 per cent of the whole land area of the United States, will be in the West and 37 per cent, or 7 per cent of the land surface of the country, in the East. In the East this land will be found mainly (see fig. 1) in New England and in the Adirondack region of New York; in eastern and northern Minnesota, northern Wisconsin, and Michigan; along the Allegheny and Cumberland plateaus; in the Blue Ridge and Smoky mountains in the States of Virginia, North Carolina, and Georgia; in the Middle West, in the Ozark region of Missouri and Arkansas; and in the far West, along the Rockies and the Pacific coast mountains.

INTERMEDIATE LAND.

In addition to these areas which are unsuitable for any other purpose but that of raising timber, there will always be belts and patches of land which are neither exclusively forest land nor agricultural land, but may be devoted to either purpose as the local conditions (such as density of population and distance from markets) may make the one or the other more profitable.

The hilly country of the northeast, where stones and bowlders render cultivation difficult, the hilly land of the Piedmont Plateau and of the Ohio Valley, where the heavy soil makes erosion very great, and the sandy land along the Atlantic coast and in the Lake States are included in this class of land. This land, intermediate in character, is included at present largely with the unimproved farm land, and will be so more and more in the future. Of the 426,000,000 acres of unimproved farm land, about 150,000,000 to 200,000,000 acres are now estimated as woodlots, although not all farm woodlots are necessarily on intermediate land. The rest is swamps, barrens, and tidelands. With the increase in population and the increasing demand for farm lands for cultivation, the areas of individual woodlots will probably shrink. The number of woodlots, however, will undoubtedly increase as the people more fully realize their value as a protection against erosion, winds, and frost, and the woodlot will play an essential part in intensive methods of farm management. While it is difficult to predict their exact extent, it is safe to assume that there will always be a large area of farm woodlots. These woodlots will in the future, as at present, produce the posts, poles, and fuel needed on the farm and will grow some timber as well.

Thus, in order to provide a population of 150,000,000 people with all the timber needed for construction, ties, poles, pulp, and all the various uses for which wood seems to be the only suitable material, there will be available an area of about 360,000,000 acres, in addition to the area under woodlots, which may be liberally estimated as 100,000,000 acres, or a total of only about 450,000,000 acres of forest land against the present 550,000,000 acres. This forest land, in addition to supplying the timber, must also protect the soil from erosion, regulate the stream flow, and exert its wholesome influence upon the lives of the people.

Will this area be sufficient?

While we have at present no accurate means of determining the extent of forest land necessary for the regulation of stream flow and the protection of the soil against erosion, it may be inferred from a study of the conditions existing in other countries that, in order not to disturb the natural balance, the proportion of forest land to other kinds of land must be not less than from one-fifth to one-third of the total area of the country.

With the exception of those countries which have naturally a humid climate, like Great Britain or the Netherlands, the countries with a forest area of only 20 per cent or less show usually to a marked degree bad climatic conditions, with prolonged droughts, frosts, and alternating floods and low water, as a result of the reduced forest area. Portugal, with a forest area of only 3½ per cent of the total; Spain, with 16 per cent; Greece, with 13 per cent; Turkey, with 20 per cent; and Italy, with 14 per cent, are good examples.

While the area absolutely necessary for the regulation of streams and the protection of soils can be determined only approximately and indirectly, the area necessary to make a country self-sustaining as regards the production of timber can be found with greater accuracy. If we compare the exports and imports of the different countries with the forest area for every 100 inhabitants, we find that countries with 92 acres or more per 100 inhabitants have a surplus of exports over imports, while those with 85 acres or less have a surplus of imports over exports. Apparent exceptions to this rule appear in the cases of Bulgaria and Servia. These countries, while at present importing more wood than they export, possess considerable areas of forest, now inaccessible, and, with the development of means of exploitation and the increased demand for lumber, they will in time become exporting countries.

Relation between forest area per 100 inhabitants and exports and imports of wood of the different countries.

Country.	Forest land[a] per 100 inhabitants.	Excess of exports over imports.[a]	Excess of imports over exports.[a]
EXPORTING COUNTRIES.	*Acres.*		
Canada	2,490	$26,551,000	.....
Finland	1,850	14,970,000	.....
Sweden	952	34,770,000	.....
United States	775	13,450,000	.....
Norway	762	9,585,000	.....
Russia in Europe	462	23,039,000	.....
Bosnia-Herzegovina	405	2,632,500	.....
Bulgaria[b]	230	.....	$407,000
Servia[b]	155	.....	148,000
Roumania	127	961,000	.....
Austria-Hungary	103	32,756,000	.....
IMPORTING COUNTRIES.			
Greece	85	.....	873,000
Switzerland	66	.....	3,653,000
Germany	61	.....	48,750,000
France	61	.....	19,270,000
Italy	32	.....	5,964,500
Denmark	25	.....	4,817,000
Belgium	20	.....	16,330,000
Netherlands	10	.....	5,945,000
Great Britain	7	.....	93,950,000

[a] Average for five years, 1895–1899. From Forests and Forestry in the Different European Countries, A. A. Radzig, St. Petersburg, 1902.

[b] Timber land largely in mountains and difficult of access. These countries will in time become exporters instead of importers.

In other words, countries with about 100 acres or more per 100 inhabitants produce more wood than they actually consume, while countries with 85 acres or less per 100 inhabitants produce less wood than they actually consume. From this we may infer that a country in order to be self-sustaining as regards its timber supply must have an area of about 100 acres of forest land for every 100 inhabitants. The area necessary to supply all the wood needed for home consumption will vary, of course, with the per capita consumption; and the 100 acres per 100 inhabitants must be considered the minimum area, because it is based upon a moderate per capita consumption, such as is found in densely populated countries of Europe, like Germany or France.

The same minimum area for every 100 inhabitants necessary to make a country self-sustaining can also be deduced in another way. At present Germany imports 353,000,000 cubic feet of wood from abroad. To produce this amount of timber Germany would have to possess a forest area of 17,000,000 acres in addition to the 35,000,000 acres now available. In other words, she would need 52,000,000 acres of forest in order to meet her own timber requirements, or 93.2 acres for every 100 inhabitants. Germany is an extremely good example with which the productivity of the forests of all other countries can be compared, because her forests can be taken as a standard of productiveness.

In this country, where the per capita consumption is six times as great as that in Germany or France and the annual growth per acre may be estimated roughly as one-third of that in those countries, the forest area would have to be 1,600 acres for each 100 inhabitants, or more than twice the present area, in order to maintain the present cut. The present area of 775 acres for every 100 inhabitants at the present per capita consumption and annual growth per acre would be insufficient to meet our own needs if there were not present a supply of virgin timber, the accumulated capital of centuries, to meet the deficiency. With the exhaustion of this remaining virgin supply, which can last only about thirty years more, there must come a time when not only all our exports of timber must cease but there will not be enough wood for home consumption.

Even as it is, the total exports of wood from this country amount to only 5 per cent of the lumber cut, while the surplus of exports over imports is only 1.8 per cent—an insignificant amount. This shows clearly that we have practically ceased to be an exporting country, and the tendency will be more and more toward becoming a wood-importing country.

How shall this shortage be met?

With an increasing demand for land for agricultural crops there is little hope of increasing the extent of forest land. As we have seen, the area necessary for this purpose would have to be more than double the present area, and this is entirely out of the question. Much of the land now under forest, but capable of producing crops, will have to be cleared and tilled to provide for an increased population. All the evidence, therefore, is that the land under forest will, during the next fifty years, be reduced to 450,000,000 acres, and this reduced area will have to provide for a population almost twice as large as the present. Nor will there be much hope for covering the shortage in our home production by importations from abroad.

The demand for timber is constantly growing all over the world. It increases at the rate of 5 per cent annually. If we compare the total excess of imports over exports of all wood-importing countries of Europe with the total excess of exports over imports of all wood-exporting countries, we shall find that there is a deficit for Europe of 141,000,000 cubic feet, which is met at present by imports from North America. Sweden, Norway, and Austria-Hungary have already touched the highest point in their exports. Russia could probably increase to some extent its exports from the north, where there are still large areas of virgin forest, but the growing home consumption and the growing scarcity of timber in the other parts of the Empire make it very unlikely that larger supplies of timber for export will be available. Canada is still able to increase its exports, but the drain upon the Canadian forests is growing every year, and they will remain the only source of supply to satisfy the urgent needs of the rest of the world for coniferous timber after Austria-Hungary and Russia cease to be exporting countries. Under such conditions there will be many bidders for the Canadian timber, and the United States will by no means have an exclusive claim.

Exports of the chief wood-exporting countries of the world for the period between 1881 and 1903.[a]

[In thousands of dollars.]

Country.	1881–1890.	1891–1895.	1896–1900.	1901.	1902.	1903.
Sweden	27,100	31,450	40,675	37,250	38,750	41,500
Norway	9,350	7,850	11,325	10,000	10,750	14,000
Finland	8,700	10,175	17,500	20,300	21,625	26,250
Russia	16,925	22,700	29,250	30,900	29,925	35,250
Austria-Hungary	23,875	25,800	42,500	47,300	42,200	49,900
United States	21,375	21,250	40,300	41,375	52,075	51,550
Canada	23,000	23,450	27,825	29,850	33,500	31,400
Total	130,325	142,675	209,375	216,975	228,825	249,850

[a] Only the most common timber and wood are included. Dr. Max Endres's Handbuch der Forstpolitik, Berlin, 1905, p. 610.

The United States can not, therefore, depend to any great extent for its future supply of timber upon imports from abroad.

The growing demand for wood material must be met, then, not by an increase of the forest land nor by depending on imports from abroad, but by an increase in the productiveness of the forest and a decrease in the waste, to which chiefly is due the fact that the United States has the greatest per capita consumption in the world.

A reduction of the per capita consumption of wood in the United States would not mean a lowering of the standard of living, as would be the case, for instance, with a similar decrease in the consumption of wheat. Abundance breeds extravagance, and the present per capita consumption is not a true indication of the real needs of the people. Countries with greatly differing standards of living, such as the United States, Sweden, Canada, and Russia, but with abundance of forests, all show a high per capita consumption of wood. The waste in the utilization of our timber products is enormous. We use only 50 per cent of the total volume of the tree and leave 50 per cent to be wasted. We are just beginning to learn the usefulness of many trees hitherto considered worthless. We are just beginning to learn to prolong the life of ties, poles, and posts by means of preservative treatment.

It is safe to assume that by greater economy in the use of wood the per capita consumption could easily be reduced from 260 to 150 or even 100 cubic feet without curtailing in the least the real needs of the people.

The other, even more effective, means of meeting the increasing demand for wood is by increasing the productiveness of the forest land. The annual production of our forests is scarcely more than 12 cubic feet per acre of all kinds of wood, including firewood, of which less than 10 cubic feet is of log and bolt sizes, while for all of Germany the annual growth per acre is more than 38 cubic feet, and the forests of Saxony produce 93 cubic feet, those of Switzerland 50 cubic feet, and those of France nearly 40 cubic feet. Our forests have been badly burned in the past and have been entirely neglected. By proper care and protection the forests of the United States can not only be made to produce as much as those of France or Switzerland, but they can produce even more. While a portion of our forests, confined to the North and to the Rocky Mountains, is naturally of slow growth, the bulk of the forests is in the regions extremely favorable to tree growth, as in the Southern Appalachians and on the Pacific coast. They are stocked, on the whole, with very fast growing species, capable of attaining enormous dimensions, and are still growing on a virgin soil possessing wonderful productive power. Under such conditions the annual growth per acre in our forests can easily be increased to two or even three times the present growth within a comparatively short time.

With the per capita consumption reduced to 150 cubic feet and an annual growth per acre of only 50 cubic feet, the 450,000,000 acres upon which we shall have to depend for our timber will be capable of supplying the needs of a population of 150,000,000 people.

That this is entirely within the bounds of realization is well shown in the case of the hardwood supply in the Southern Appalachian Mountains. Studies by the Forest Service in the Cumberland Mountains of eastern Tennessee showed that under protection these woods are capable of producing even at present an average of 50 cubic feet annually. Taking the annual production at only 40 cubic feet, this would mean that the 75,000,000 acres of absolute forest land embraced in the Appalachian region would produce 3,000,000,000 cubic feet annually, which represents practically the total hardwood cut in the country. What is true of the hardwoods is also true of the softwoods in the Rockies, in the Pacific coast mountains, and in the Northeast.

The sooner we realize as a nation that the forest land in this country will have to be reduced in order to make room for agricultural crops and that our only salvation as regards the timber supply lies in increasing the productiveness of our forest land and eliminating all possible waste, the sooner we shall solve the problem of the source of the future timber supply. From a national economic point of view, it is an enormous waste to allow 550,000,000 acres of burnt-over and neglected land to go on producing an amount which, under proper forest management, could be produced by an area half as large, and thus preventing the other half from being used for some other purpose.

What is true of the forest as a source of timber is also true of the forest as a protective cover. The influence of the forest on the climate and the flow of water in streams depends not merely on its extent, but chiefly on its condition. A vast forest area repeatedly burned, with the humus cover destroyed, has not as much value as a smaller forest area fully stocked with rich vegetable mold and the soil in good condition.

It would be a shortsighted land policy to withhold agricultural land for the growing of timber. The fundamental principle upon which a wise national land policy should rest is that every acre of land should be put to the use under which it will bring the highest returns. The diminution of forest land in a new and growing country is an inevitable economic fact, and if accompanied by a national forest policy which provides for the proper care and protection of the remaining forests, is of benefit to the development of the country.

It is the duty of the Government to help the people in adjusting the various lands for the uses to which they are best adapted by classifying them upon the basis of their properties and the climatic

conditions. A thorough survey of the lands in the United States with the view of determining the best use to which the various classes could be put would go a long way toward bringing about the most productive use of our greatest resource—the land. In 1898 the Japanese Government appropriated about $13,000,000 for the purpose of classifying the land within the Government forests into exclusively forest land and land that could be used for agriculture. In Russia, where the land famine of the peasants is to be partially satisfied by converting a portion of the forests into cultivable farms, the question of what land should be cleared and what should be left under forest is the burning question of the day.

Fortunately, the physiographic and climatic conditions of our country are such that, no matter how great the demand for agricultural land may be in the future, the area exclusively adapted to the production of timber should, if properly cared for, be large enough to supply all of our needs for wood and to exercise the protective function.

It is, therefore, not by resisting the inevitable economic progress of this country that we can best solve the serious problem of providing for the future timber supply, but by looking the facts squarely in the face and beginning immediately to prepare ourselves for the time when a reduced forest area will have to meet an increasing demand for timber. We must do it now, while it is not too late.

[Cir. 159]

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